PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	See form PCT/ISA/210
Applicant's or agent's file reference DPPC 138.818	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/EP2005/000554	17.01.2005	16.01.2004

International Patent Classification (IPC) or both national classification and IPC
G02B6/42, G02B6/00

Applicant
ICOS VISION SYSTEMS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I — Basis of the opinion
- ☒ Box No. II — Priority
- ☐ Box No. III — Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV — Lack of unity of invention
- ☒ Box No. V — Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI — Certain documents cited
- ☐ Box No. VII — Certain defects in the international application
- ☐ Box No. VIII — Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
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International application No.
PCT/EP2005/000554

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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International application No.
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Box No. II Priority

1. ☐ The following document has not yet been furnished:

   ☐ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

   ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

   Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*1 and 64.1) is the claimed priority date.

WRITTEN OPINION OF THE
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International application No.
PCT/EP2005/000554

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims	1-13	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

2. Citations and explanations:

1. Reference is made to the following document:
D1: US-A-5 013 311 (NOURI *ET AL.*) 7 May 1991

2. Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (the references between parentheses relate to said document):

2.1 An illumination unit having
- a light source (28),
- first optics (90) for focussing the light emitted by the light source (28) (column 6, line 68 - column 7, line 1),
- a light measurement head (16) for illuminating an object with a predefined brightness value,
- an optical waveguide (91) for transmitting the emitted and focussed light to the light measurement head (16),
- a displacement unit (92) for varying the axial distance from the first optics to the optical waveguide,
wherein the intensity of the light input in the optical waveguide can be varied by axially

displacing the first optics (column 7, lines 5-10).

2.2 The subject matter of claim 1 differs therefore from the known illumination unit in that the light source is a high-power light source, in that the high-power light source is coupled to the first optics, and in that the cross-sectional area of the focus is at least twice as large as the cross-sectional area of the optical waveguide at the light inlet side.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).
Nevertheless, the use and focussing of a high-power light source are known and obvious to a person skilled in the art (D1, high-power light source 230). Furthermore, the coupling of the light source to the first optics has no major effect in terms of the invention.

2.3 The problem addressed by the present invention can therefore be considered that the illumination is more homogeneous (description page 2, lines 34-35).

2.4 The solution proposed to this problem in claim 1 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

No document in the prior art shows a focus whose cross-sectional area is at least twice as large as the cross-sectional area of the optical waveguide inlet. This solves said problem. Furthermore, this exact value is not obvious to a person skilled in

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

the art.

3. The subject matter of claim 10 is novel and inventive for the same reasons.

4. Claims 2-9 are dependent on claim 1 and thus likewise meet the PCT requirements for novelty and inventive step.

5. Claims 11-13 are dependent on claim 10 and thus likewise meet the PCT requirements for novelty and inventive step.